Public / Private Entity Analysis

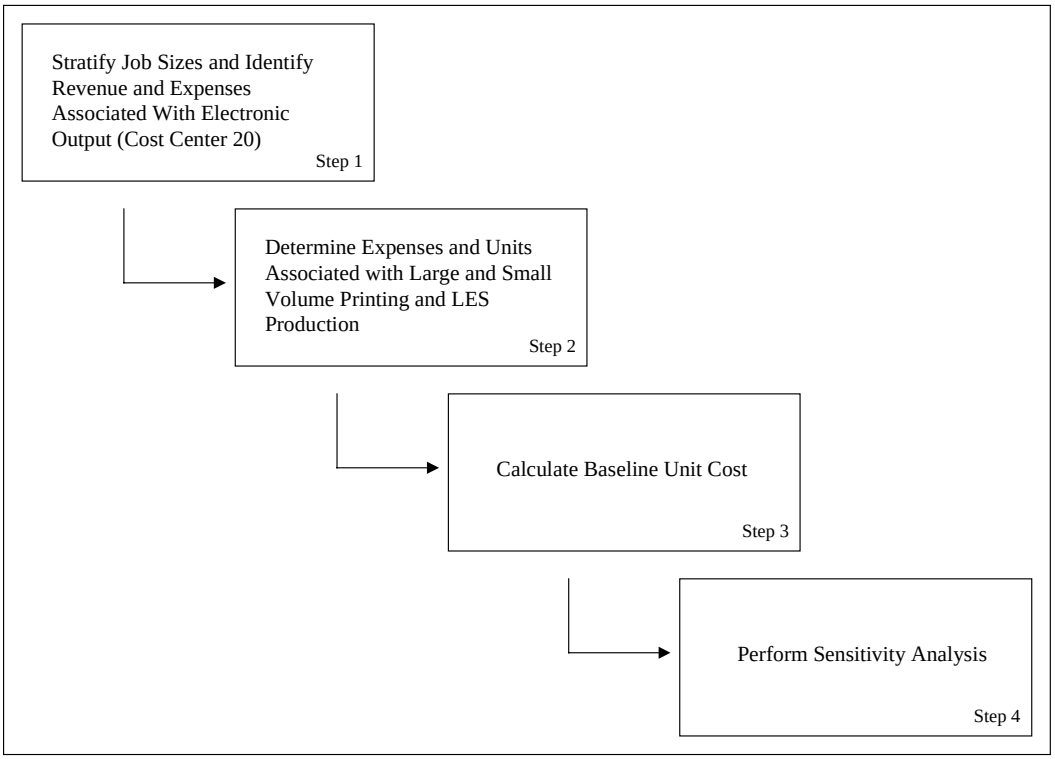
This appendix provides an explanation of the calculations used to determine DAPS unit cost range for each unit of comparison as well as the results of the public / private entity survey for each unit of comparison.

Electronic Output

As discussed in Section 5, DAPS primary source of revenue (generated in-house) and expenses (including labor) is electronic output. The primary components of the Electronic Output department are electronic printing (which includes printing from hard copy, disk, network, and mainframe) and Leave and Earnings Statement (LES) production. As discussed in the DAPS Financial Overview, Exhibit 4-7 showed that the Electronic Output department represented roughly two-thirds of DAPS revenues and expenses when pass-through activity was removed. For this reason, KPMG has chosen to address the "units of comparison" within the Electronic Output department first. These "units of comparison" are small volume printing, large volume (including mainframe) printing, and LES production.

KPMG used the process depicted in Exhibit G-1 to develop a printing unit cost range for evaluating the Electronic Output units of comparison against other government and commercial printing entities. Within this section, the term's units and impressions are used interchangeably.

Exhibit G-1, Process for Calculating DAPS Printing Cost Ranges

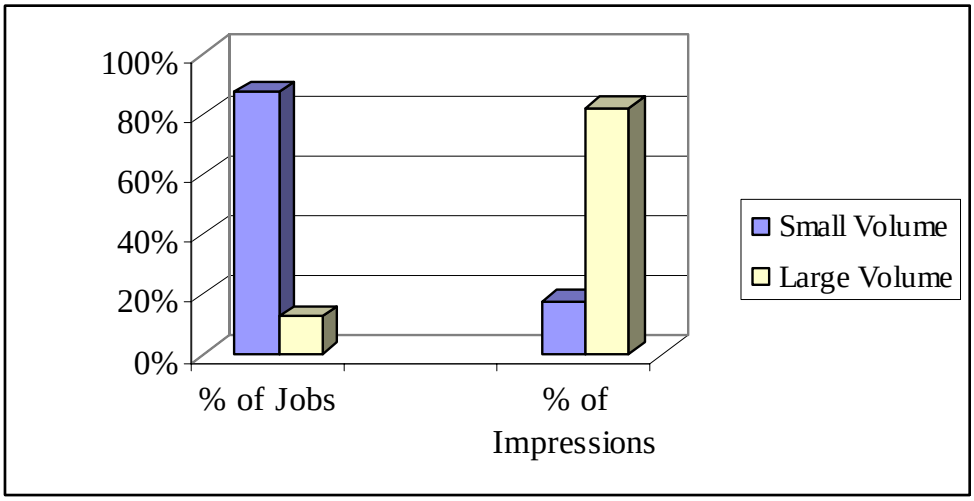


Large and Small Volume Printing

Step 1. The first step in determining the unit costs for electronic printing was stratifying job sizes into categories. DAPS Pricing Manual lists different prices for high and low volume printing. Low volume printing is defined as printing for any customer that does not exceed 500,000 total impressions per month. High volume printing is defined as printing for any customer who exceeds 500,000 impressions per month, networked output, and all output for the Defense Finance and Accounting Service and Defense Information Systems Agency. Definitions for high and low volume printing do not specify individual job sizes, however, and industry representatives indicated that they would have trouble providing a unit price based only on total monthly impressions. For this reason, KPMG attempted to stratify DAPS jobs by volume. After speaking with representatives from DAPS and industry, KPMG concluded that jobs under 10,000 impressions were generally considered to be small volume and jobs over 10,000 impressions were generally considered to be large volume.

Using the database of DAPS jobs completed during FY98, KPMG determined that small volume jobs represented roughly 245,000 of the 280,000 jobs in the database with large volume jobs making up the remaining 35,000 jobs. Despite constituting nearly 88% of DAPS printing jobs, these small volume jobs represented only 18% of DAPS total impressions. Exhibit G-2 illustrates this point.

Exhibit G-2, DAPS Small and Large Volume Printing – Jobs versus Impressions



This exhibit indicates that large volume printing, despite making up only 12% of DAPS jobs, represents the overwhelming majority of DAPS printing.

Using these job categorizations, KPMG began the process of determining the small and large volume printing unit cost by first determining the total costs associated with these jobs. As stated earlier, DAPS costs are not directly allocated to associated products / revenue processes and are instead allocated at the cost center level. In addition, DAPS accounting system does not provide enough detail to calculate a precise unit cost range for small and

large volume jobs. For this reason, KPMG combined the large and small volume units of comparison to determine a single unit cost range.

One modification was made to DAPS financial data before performing the unit cost range calculations. DAPS allocates the overhead accrued from its local plants and Regional Business teams to cost centers based on labor hours. Overhead from the CST is allocated by cost center revenue. Prior to developing the unit cost range, CST overhead was reallocated based on labor hours to ensure consistent overhead allocation.

After stratifying DAPS printing jobs, the next step KPMG took to calculate a unit cost range for large and small volume printing was determining the FY98 revenue and expenses associated with the Electronic Output cost center. DAPS FY98 revenue for the Electronic Output Cost Center is provided in Exhibit G-3.

Exhibit G-3, FY98 Revenue for Electronic Output Cost Center

Revenue Process	**FY98 Revenue**
Duplicate Original/Proof	1,157,500
Run Low Volume	48,231,563
Run High Volume	51,293,275
Labor Electrostatic Output	5,162,261
Database Scan	19,713
CONUS LES Production	2,967,340
Distribute and Output	32,391
Total Revenue for Electronic Output Cost Center	$108,864,043

DAPS FY98 expenses for the Electronic Output Cost Center are provided as G-4.

Exhibit G-4, FY98 Expenses for Electronic Output Cost Center

Expenses	
Direct Process Labor	23,275,496
Procurement Labor	-
Supervisory DP Labor	2,154,256
Contract Labor	1,743,601
Commercial Printing	-
Cost per Copy Contract	-
Direct Materails	3,042,282
Rental Production Equip	10,683,726
Equipment Repair and Maint	27,370,717
Cost of Production Equip	2,575,653
Depreciation Direct Equip	3,288,010
Postage	-
Contract Services/Vehicle	947,154
Production Expense Applied	6,712,148
General Expense Applied	19,963,631
Dividion Espense Applied	3,404,330
GnA Fee Transfer of DAPS CST*	4,810,397
Total Expense for Electronic Output Cost Center	$109,971,401
** Differs from Reported Expenses Due to KPMG Reallocation of CST*	

Subtracting the expenses accrued in this cost center from revenue yields a $1,107,357 or 1% loss. Not included in the electronic output cost center is the cost and revenue associated with the paper used for the printing (except for leave and earnings statements where paper is included). The paper cost center provided DAPS with a five million-dollar gain in FY98. During KPMG's commercial entity consultative interviews and site visits, industry representatives recommended that the price of paper not be included in questions requesting printed impression unit price since the price of paper can vary significantly over time.

Step 2. The next step KPMG used to determine unit cost was estimating the expenses associated with large and small volume output and total units associated with the Run Low Volume and Run High Volume revenue processes. The Run Low Volume and Run High Volume revenue processes represent the electronic output printing performed by DAPS.

For the expense calculation, KPMG made the assumption that revenue for the revenue processes not associated with impression output were equal to their costs. This assumption allowed KPMG to subtract the known revenue values from the total cost center cost to estimate the total cost for impression output. These calculations are provided in Exhibit G-5:

Exhibit G-5, Subtraction of Non-Printing Revenue Processes from Electronic Output Cost Center Expenses

Electronic Output Cost Center Expenses	$109,971,401
RPC 200 (Duplicate Original/Proof)	($1,157,500)
RPC 205 (CONUS LES Production)	($2,967,340)
Total Small & Large Volume Expenses	$105,846,561

A sensitivity analysis is provided later to describe the impact of deviations from the subtracted revenue values for cases where cost and revenue for these revenue processes are not equal. KPMG next calculated the total impressions for the Run Low and High Volume revenue processes provided in DAPS FY98 Financial Management Summary. Exhibit G-6 depicts this calculation.

Exhibit G-6, Total Impressions

	Impressions
RPC 201 (Run Low Volume)	1,929,266,986
RPC 202 (Run High Volume)	2,230,151,085
Total Impressions	4,159,418,071

For certain specialty jobs, such as jobs requiring spot color or binding that can be performed by the printing machine, DAPS will charge the customer for additional printing units rather than assess an added charge in another revenue process. The following examples are quoted from DAPS FY98 Pricing Manual:

"Runs with tape bind will be billed at 1.2x the unit rate"
"Runs with on-line perfect bind will be billed at 1.4x the unit rate"
"Runs of classified work will be billed at 1.2x the unit rate"
"Runs involving off-line machine collation will be billed at 1.2x the unit rate"

"Runs involving off-line machine collation will be billed at 1.2x the unit rate"
"Multiple color jobs (spot color) will be billed as an additional run unit for each color"

These added unit charges made it impossible, in the timeframe allocated for this study, to accurately determine the total number of impressions produced by DAPS. However, KPMG has calculated an average impression cost using the total impressions listed previously and a sensitivity analysis is performed later to determine the impact of reducing the total impression units.

Step 3. Based on the total impressions associated with run low and run high volume output stated previously, KPMG determined the baseline unit cost for DAPS large and small volume printing to be $.0254 per impression. This calculation is provided in Exhibit G-7.

Exhibit G-7, Baseline Unit Cost Calculation

Total Expenses	/	Total Impressions		Cost per Impression
$105,846,561	/	4,159,418,071	=	$0.0254 per impression

Step 4. The last step in establishing a unit cost range was performing a sensitivity analysis in which the revenue that was subtracted from the total Electronic Output cost was varied and the total impression volume was reduced. As noted in Step 2, the total impression volume is known to be overstated since specialty jobs receive increased unit charges per impression. The following scenarios were used:

Scenario 1: Assume duplicate original/proof and CONUS LES production revenue processes were operating at a 25% gain. This calculation altered the calculation performed in Exhibit G-5 by reducing the reported revenue generated in the Duplicate Original/Proof and CONUS LES Production revenue processes by 25% to simulate a 25% gain for those revenue processes. This calculation is depicted in Exhibit Gx-x.

Exhibit G-8, Scenario 1 Unit Cost Calculation

Electronic Output Cost Center Expenses	$109,971,401	
RPC 200 (Duplicate Original/Proof)	($868,125)	Operating at 25% profit (i.e. cost=revenue*.75)
RPC 205 (CONUS LES Production)	($2,225,505)	Operating at 25% profit (i.e. cost=revenue*.75)
Total Small & Large Volume Expenses	$106,877,771	
	Units	
RPC 201 (Run Low Volume)	1,929,266,986	
RPC 202 (Run High Volume)	2,230,151,085	
Total Units	4,159,418,071	
Scenario 1 Unit Cost	$0.0257	

Scenario 2: Assume duplicate original/proof and CONUS LES production revenue processes were operating at a 25% loss. This calculation altered the calculation performed in Exhibit G-5 by increasing the reported revenue

generated in the Duplicate Original/Proof and CONUS LES Production revenue processes by 25% to simulate a 25% gain for those revenue processes. This calculation is depicted in Exhibit G-9.

Exhibit G-9, Scenario 2 Unit Cost Calculation

Electronic Output Cost Center Expenses	$109,971,401	
RPC 200 (Duplicate Original/Proof)	($1,446,875)	Operating at 25% loss (i.e. cost=revenue*1.25)
RPC 205 (CONUS LES Production)	($3,709,175)	Operating at 25% loss (i.e. cost=revenue*1.25)
Total Small & Large Volume Expenses	$104,815,351	
	Units	
RPC 201 (Run Low Volume)	1,929,266,986	
RPC 202 (Run High Volume)	2,230,151,085	
Total Units	4,159,418,071	
Scenario 2 Unit Cost	$0.0252	Lower Unit Cost Bound

Scenario 3: Assume that the total number of units is reduced by 10% and the duplicate original/proof and CONUS LES production revenue processes operate at a 25% gain. This calculation assumed the same gain in the Duplicate Original/Proof and CONUS LES Production revenue processes as in Scenario 1 but also reduced the total impressions calculated in Step 2 (Exhibit G-8) by 10% to determine the impact of DAPS practice of charging a customer a unit surcharge for a single specialty impression. This calculation is depicted in Exhibit G-10.

Exhibit G-10, Scenario 3 Unit Cost Calculation

Electronic Output Cost Center Expenses	$109,971,401	
RPC 200 (Duplicate Original/Proof)	($868,125)	Operating at 25% profit (i.e. cost=revenue*.75)
RPC 205 (CONUS LES Production)	($2,225,505)	Operating at 25% profit (i.e. cost=revenue*.75)
Total Small & Large Volume Expenses	$106,877,771	
Recalculate Units assuming 10% fewer units	**Units**	
RPC 201 (Run Low Volume)	1,736,340,287	
RPC 202 (Run High Volume)	2,007,135,977	
Total Units	3,743,476,264	
Scenario 3 Unit Cost	$0.0286	Upper Unit Cost Bound

Scenario 4: Assume that the total number of units is reduced by 10% and the duplicate original/proof and CONUS LES production revenue processes operate at a 25% loss. This scenario performs a similar calculation to that described previously in Scenario 3 and is depicted in Exhibit G-11.

Exhibit G-11, Scenario 4 Unit Cost Calculation

Electronic Output Cost Center Expenses	$109,971,401	
RPC 200 (Duplicate Original/Proof)	($1,446,875)	Operating at 25% loss (i.e. cost=revenue*1.25)
RPC 205 (CONUS LES Production)	($3,709,175)	Operating at 25% loss (i.e. cost=revenue*1.25)
Total Small & Large Volume Expenses	$104,815,351	
Recalculate Units assuming 10% fewer units	**Units**	
RPC 201 (Run Low Volume)	1,736,340,287	
RPC 202 (Run High Volume)	2,007,135,977	
Total Units	3,743,476,264	
Scenario 4 Unit Cost	$0.0280	

The results of the sensitivity analysis provide a range of DAPS cost per printed impression of $.0252 to $.0286.

LES Production Unit Cost. The fact that LES production represents less than four percent of this cost center makes the allocation of expenses problematic. For this reason, KPMG has determined a range for LES units assuming a 25% gain or loss on the reported revenue. Based on this assumption the unit costs are provided in Exhibit G-12.

Exhibit G-12, Unit Cost Estimate for Leave and Earnings Statements

Cost Assuming Revenue Equals Expense	
Cost (equals LES revenue)	$2,967,340
Total LES Units	31,235,174
Baseline LES Unit Cost	$0.0950
Cost Assuming 25% Gain in LES Production	
Cost (equals 75% of revenue)	$2,225,505
Total LES Units	31,235,174
Lower Bound LES Unit Cost	$0.0712
Cost Assuming 25% Loss in LES Production	
Cost (equals 125% of revenue)	$3,709,175
Total LES Units	31,235,174
Upper Bound LES Unit Cost	$0.1187
LES Unit Cost Range: $0.0712 - $0.1187 per LES	

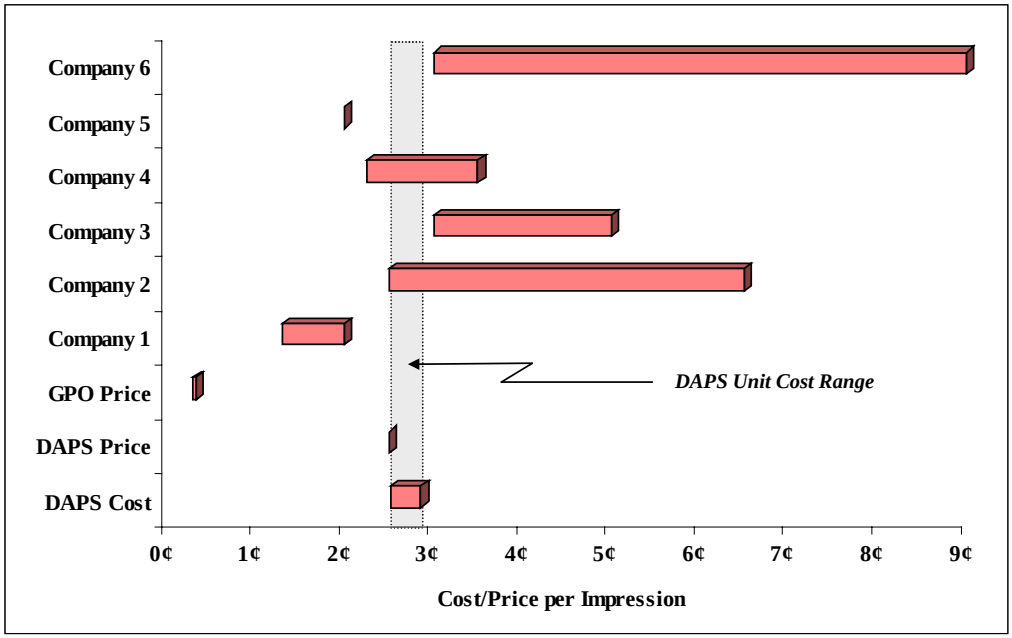
Assuming a possible 25% gain or loss in leave and earnings statement production, the possible range for unit costs is from $0.071 to $0.119 per unit. Survey respondents provided a low response of $.0145 with the remaining responses yielding a range of $.12 to $.18 per LES. Since LES production represents less than 4% of the Electronic Output cost center, these cost differences did not impact the determination of whether the Electronic Output

function is appropriate for transfer. The matrix containing the numeric responses to the survey is provided on the last page of this appendix.

Comparison of DAPS Costs to Government and Commercial Entity Prices for Small and Large Volume Printing

Using the unit cost range derived in the previous sections and the results of the surveys submitted by GPO and commercial entities, KPMG developed the following exhibits to graphically display the results of the survey for small and large volume electronic output. The matrix containing the numeric responses to the survey is provided on the last page of this appendix. Exhibit G-13 compares DAPS per impression unit cost range and unit price with the small volume per impression price ranges submitted by the survey participants.

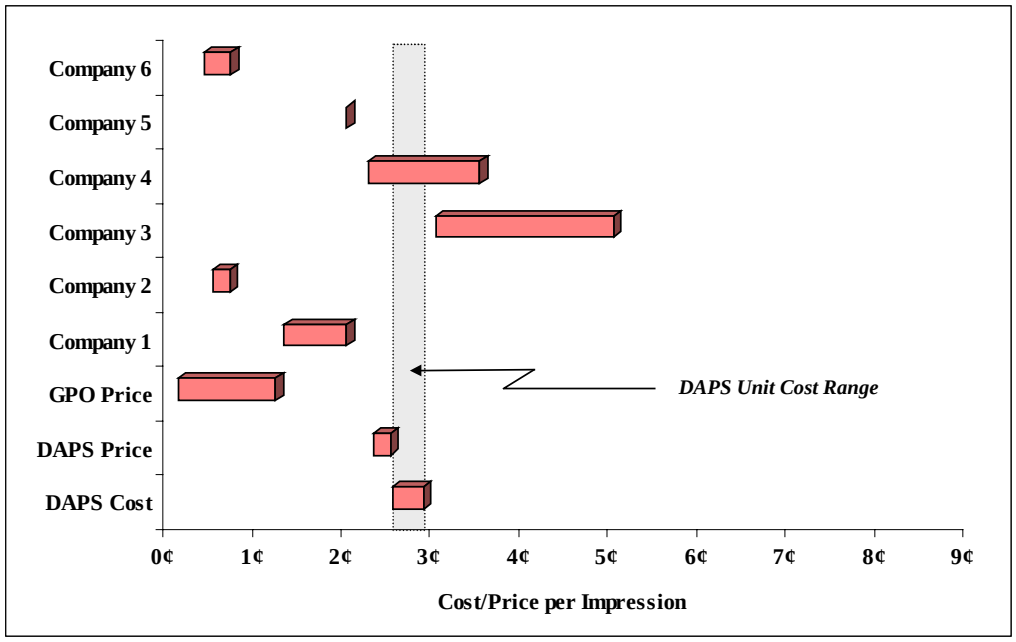
Exhibit G-13, Comparison of DAPS per Impression Unit Cost Range and Price with Other Entities' Small Volume Prices*



** Represents 18% of DAPS Total Impressions*

Exhibit G-14 compares DAPS per impression unit cost range and unit price range with the large volume (including mainframe output) price ranges submitted by the survey participants.

Exhibit G-14, Comparison of DAPS per Impression Unit Cost Range and Prices with Other Entities' Large Volume (Including Mainframe Output) Prices*



**** Represents 82% of DAPS Total Impressions***

These exhibits illustrate that DAPS unit cost range is competitive with, and in several cases is lower than, other entities in small volume output. However, in large volume output, which represents over 80% of DAPS total impressions, most of the survey participants provided prices which were well below DAPS unit cost range. The survey participants cited centralized production on optimized equipment as the key element to providing lower prices for large volume printing.

In the course of evaluating the survey responses, KPMG attempted to evaluate the validity of the prices provided by the survey respondents. This was difficult since most of the industry respondents were reluctant to provide actual contracts or invoices (even with customer names or other sensitive data deleted). However, one of the commercial respondents, whose price range in both small and large volume printing was lower than DAPS, was able to provide their contract with the General Services Administration for document production services (production equipment, labor, and supplies were all included) which confirmed a unit cost range below that of DAPS.

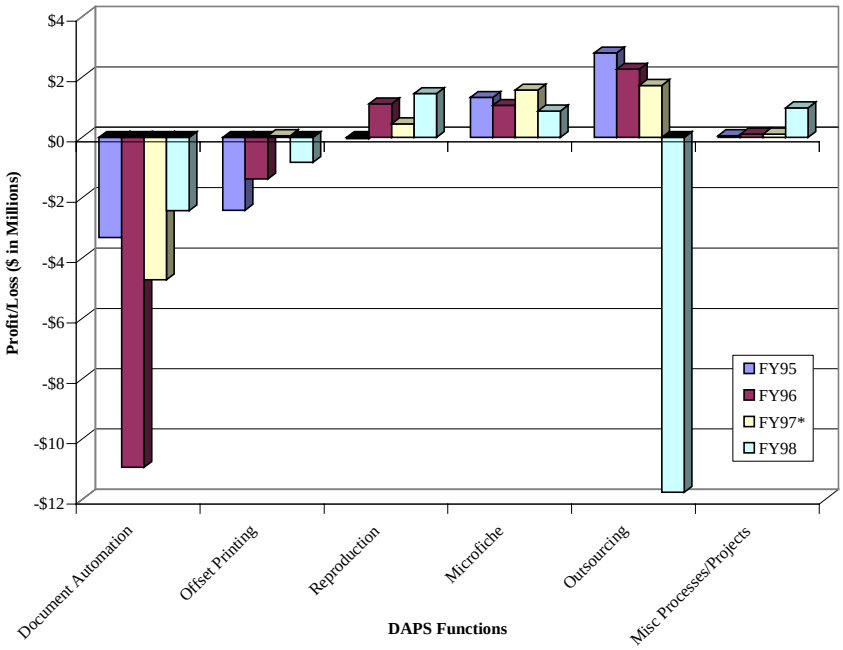
Based on the data provided by industry through the private / public entity survey as well as on-site interviews with several of the respondents and the three step analysis process described at the beginning of this section, KPMG concludes that the Electronic Output function is appropriate for transfer.

Remaining DAPS Functions

The remainder of this section will discuss the appropriateness of transfer of DAPS remaining functions; Outsourcing, Miscellaneous Processes and Projects, Reproduction, Document Automation, Microfiche, and Offset Duplicating / Printing.

Since Electronic Output represents nearly two-thirds of DAPS in-house business and has been determined to be appropriate for transfer, DAPS would have to dramatically transform operations to continue performing only these remaining six functions. DAPS Financial Management Summary for fiscal year 1998 indicates that these six functions suffered a loss of over $11 Million in fiscal year 1998. Even after reallocating the CST overhead costs by labor expenses versus revenue (which served to transfer additional costs into the Electronic Output department), the loss for the remaining six functions was still over $9 Million which represents a nearly 13.5% loss for those departments. This is consistent with the trend in FY95 through FY97 where the six functions (excluding gains from Electronic Output) suffered losses of $1.6 Million, $7.8 Million, and $0.8 Million respectively. Results for each Department for FY95 through FY98 are provided in Exhibit G-15.

Exhibit G-15, FY95 through FY98 Profit/Loss for DAPS Departments (Excluding Electronic Output)



* FY97 Data is DAPS estimate. No year-end report available due to accounting system transition

As stated earlier in this section, KPMG's interviews with industry entities indicate that all of DAPS non-electronic output functions could be performed by other entities. However, industry had difficulty responding to the questions in the public / private entity survey

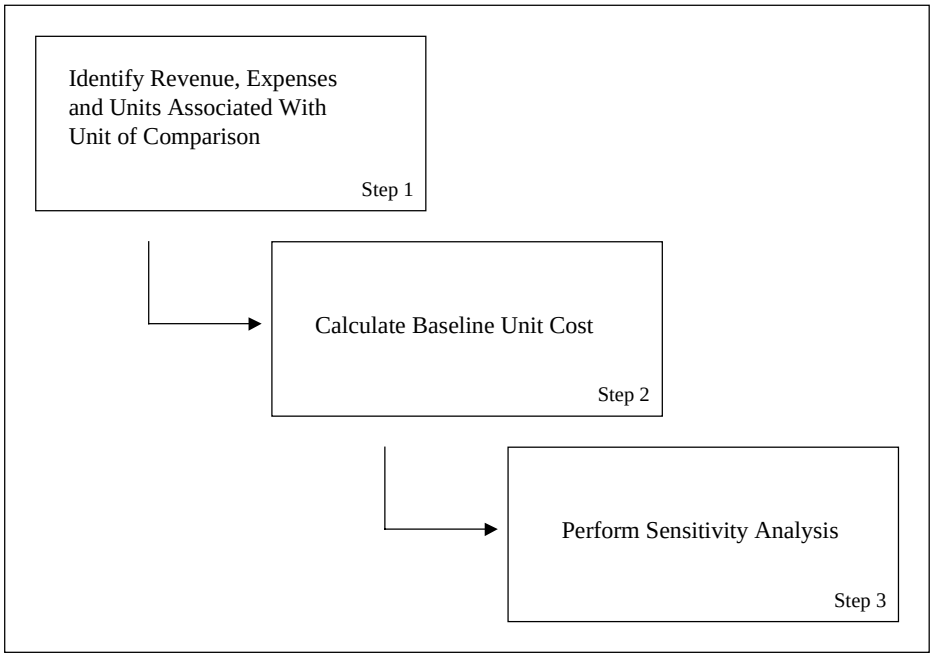
pertaining to the non-electronic output functions due to the specialized nature of those functions and industry's movement toward value-added services (versus specific products) for these functions. For this reason, KPMG received few numeric responses to the non-electronic output survey questions to compare to DAPS although nearly all of the respondents indicated that they do perform most or all of the functions.

Due to the apparent unprofitability of these functions, the ability of industry to perform all of these functions, and since DAPS in-house revenue would be reduced to roughly $70 Million (spread over 300+ sites) without Electronic Output, KPMG believes these functions are all appropriate for transfer to another entity.

Calculations of DAPS Unit Cost Ranges for Remaining Functions

KPMG used a process similar to the one used to calculate the unit cost range for small and large volume in the calculation of unit cost ranges for the Offset Printing / Duplicating, Engineering Drawing, Color Copy, Computer Output Microform, Microfiche Duplicate, and Addressing, Mailing, and Delivery units of comparison. This process is provided in Exhibit G-16.

Exhibit G-16, Process for Determining DAPS Unit of Comparison Cost Ranges



The first step in this process identified the revenue, expenses (at the cost center level), and units associated with the unit of comparison. Starting with the expenses, at the cost center level, for each unit of comparison, KPMG subtracted the revenue processes not associated with the unit of comparison from the cost center expenses. This calculation was performed assuming expenses equaled revenue for each subtracted revenue process. Total units for each unit of comparison were calculated by adding the total units for each revenue process associated with the unit of comparison. Step 2 of the process calculated the baseline unit cost

for the unit of comparison by dividing the total cost associated with the unit of comparison by the total units. Finally in Step 3, a sensitivity analysis was performed where the calculations performed in Steps 1 and 2 were varied by assuming a loss or gain in the revenue processes (which were assumed to equal expenses) not associated with the units of comparison. The end result of Step 3 was a unit cost range for the units of comparison.

The following exhibits detail the actual calculations performed to arrive at unit cost ranges for the aforementioned units of comparison. The matrix containing the numeric responses to the survey is provided on the last page of this appendix.

Exhibit G-17 depicts the unit cost range calculation for Offset Printing Duplicating.

Exhibit G-17, Unit Cost Range for Offset Printing / Duplicating

Step 1	
Total Cost for Offset Printing/Duplicating	
Cost Center 31 (Offset Duplicating)	$39,007
Cost Center 32 (Offset Printing)	$1,238,354
RPC 325 (Thermo - MR)	($47,512)
RPC 326 (Thermo - Run)	($41,364)
RPC 327 (22X36 2-Color Perf - MR)	($38,693)
RPC 328 (22X36 2-Color Perf - Run)	($161,007)
Plus CST Reallocation	$33,792
Total Cost	$1,022,577
Total Units	
RPC 310 (Run)	7,871,785
RPC 320 (Makeready)	83,034
RPC 321 (Run - up to 11 x 17)	12,541,984
RPC 322 (Run - 19 x 25)	36,563,886
RPC 323 (Run - 22 x 34)	11,881,046
RPC 324 (Run - 35 x 45)	3,500
Total Units	68,945,235
Step 2	
Baseline Unit Cost ($/Unit)	$0.0148

Step 3 - Sensitivity Analysis	
25% Gain in RPC 325, 326, 327, & 328	
Cost Center 31 (Offset Duplicating)	$39,007
Cost Center 32 (Offset Printing)	$1,238,354
RPC 325 (Thermo - MR)	($35,634)
RPC 326 (Thermo - Run)	($31,023)
RPC 327 (22X36 2-Color Perf - MR)	($29,020)
RPC 328 (22X36 2-Color Perf - Run)	($120,755)
Plus CST Reallocation	$33,792
Total Cost (with assumed gains)	$1,094,721
Total Units	68,945,235
Upper Unit Cost Bound ($/Unit)	$0.0159
25% Loss in RPC 325, 326, 327, & 328	
Cost Center 31 (Offset Duplicating)	$39,007
Cost Center 32 (Offset Printing)	$1,238,354
RPC 325 (Thermo - MR)	($59,390)
RPC 326 (Thermo - Run)	($51,705)
RPC 327 (22X36 2-Color Perf - MR)	($48,366)
RPC 328 (22X36 2-Color Perf - Run)	($201,259)
Plus CST Reallocation	$33,792
Total Cost (with assumed losses)	$950,433
Total Units	68,945,235
Lower Unit Cost Bound ($/Unit)	$0.0138

Offset Printing / Duplicating Unit Cost Range: $0.0138 - $0.0159 per page

Exhibit G-18 depicts the unit cost range calculation for Engineering Drawings.

Exhibit G-18, Unit Cost Range for Engineering Drawings

Step 1		**Step 3 - Sensitivity Analysis**	
Total Cost for Engineering Drawings		**25% Gain in RPC 401, 402, 403, 404, 405**	
Cost Center 40 - Drawings	$6,178,633	Cost Center 40 - Drawings	$6,178,633
RPC 401 (Blowback Copy)	($176,389)	RPC 401 (Blowback Copy)	($132,292)
RPC 402 (Plotter)	($318,350)	RPC 402 (Plotter)	($238,763)
RPC 403 (Folding)	($189,518)	RPC 403 (Folding)	($142,139)
RPC 404 (Collate/Assembly)	($108,795)	RPC 404 (Collate/Assembly)	($81,596)
RPC 405 (Stitch)	($49,608)	RPC 405 (Stitch)	($37,206)
Plus CST Reallocation	$115,750	Plus CST Reallocation	$115,750
Total Cost	$5,335,973	**Total Cost (with assumed gains)**	$5,662,388
Total Units			
RPC 400 (Foldouts/Drawings)	23,344,169	**Total Units**	23,344,169
Step 2		**Upper Unit Cost Bound ($/Unit)**	$0.243
Baseline Unit Cost ($/Unit)	$0.229		
		25% Loss in RPC 401, 402, 403, 404, 405	
		Cost Center 40 - Drawings	$6,178,633
		RPC 401 (Blowback Copy)	($220,486)
		RPC 402 (Plotter)	($397,938)
		RPC 403 (Folding)	($236,898)
		RPC 404 (Collate/Assembly)	($135,994)
		RPC 405 (Stitch)	($62,010)
		Plus CST Reallocation	$115,750
		Total Cost (with assumed losses)	$5,125,308
		Total Units	$23,344,169
		Lower Unit Cost Bound ($/Unit)	$0.220

Engineering Drawing Unit Cost Range: $0.220 - $0.243 per square foot

Exhibit G-19 depicts the unit cost calculation for Color Copies. Since DAPS includes the paper in this unit of comparison, KPMG has subtracted DAPS unit price for paper ($0.0063) from the baseline unit cost. In addition, since within this cost center all revenue processes are associated with the unit of comparison, KPMG has not performed a sensitivity analysis and only computed a baseline unit cost.

Exhibit G-19, Unit Cost for Color Copies

Step 1	
Total Cost for Color Copies	
Cost Center 42 - Color Copiers	$7,587,571
Plus CST Reallocation	($20,334)
Total Cost	$7,567,237
Total Units	
RPC 420 (Full Color Copy Low Volume)	2,996,334
RPC 421 (Full Color Copy Medium Volume)	1,450,756
RPC 422 (Full Color Copy High Volume)	8,415,331
Total Units	12,862,421
Step 2	
Baseline Unit Cost with Paper ($/Unit)	$0.588
Baseline Unit Cost without Paper ($/Unit)	$0.582
(subtract $0.0063 from baseline unit cost)	
Step 3 - Sensitivity Analysis	
None performed since all revenue processes are associated with the unit of comparison	

Exhibit G-20 depicts the unit cost range calculation for the 105mm Computer Output Microform unit of comparison.

Exhibit G-20, Unit Cost Range Calculation for 105mm Computer Output Microform Production

Step 1	
Microfiche Labor (RPC 507) allocated as a percentage of revenue for RPC's 500, 501, 502, & 503	
Total Cost for Microfiche Cost Center	
Cost Center 50 - Microfiche	$3,813,969
501 Microfiche Planetary	($118,370)
502 Microfiche Duplicate Low	($628,339)
503 Microfiche Duplicate High	($625,965)
507 Microfiche Labor	($147,323)
Plus CST Reallocation	$94,693
Total Cost	$2,388,665
Revenue Processes	
500 Microfiche 105 COM	$2,792,897
501 Microfiche Planetary	$118,370
502 Microfiche Duplicate Low	$628,339
503 Microfiche Duplicate High	$625,965
507 Microfiche Labor	$447,072
Total Revenue	$4,612,643
Total Units	
RPC 500 (Microfiche 105 Com)	1,755,460
Step 2	
Baseline Unit Cost for 105 COM	$1.36

Step 3 - Sensitivity Analysis	
25% Gain in RPC501, 502, 503, & 507	
Cost Center 50 - Microfiche	$3,813,969
501 Microfiche Planetary	($88,778)
502 Microfiche Duplicate Low	($471,254)
503 Microfiche Duplicate High	($469,474)
507 Microfiche Labor	($110,492)
Plus CST Reallocation	$94,693
Total Cost (with assumed gains)	$2,768,664
Total Units	1,755,460
Upper Unit Cost Bound ($/unit)	$1.58
25% Loss in RPC501, 502, 503, & 507	
Cost Center 50 - Microfiche	$3,813,969
501 Microfiche Planetary	($147,963)
502 Microfiche Duplicate Low	($785,424)
503 Microfiche Duplicate High	($782,456)
507 Microfiche Labor	($184,154)
Plus CST Reallocation	$94,693
Total Cost (with assumed losses)	$2,008,666
Total Units	1,755,460
Lower Unit Cost Bound ($/unit)	$1.14

105mm Computer Output Microform Unit Cost Range: $1.14 - $1.58 per fiche

Exhibit G-21 depicts the unit cost range calculation for the Duplicate 105mm Microfiche unit of comparison.

Exhibit G-21, Unit Cost Range Calculation for Duplicate 105mm Microfiche

Step 1	
Microfiche Labor (RPC 507) allocated as a percentage of revenue associated with RPC's 500, 501, 502, & 503	
Total Cost for Microfiche	
Cost Center 50 - Microfiche	$3,813,969
500 Microfiche 105 COM	($2,792,897)
501 Microfiche Planetary	($118,370)
507 Microfiche Labor	($312,453)
Plus CST Reallocation	$94,693
Total Cost	$684,942
Revenue Processes	
500 Microfiche 105 COM	$2,792,897
501 Microfiche Planetary	$118,370
502 Microfiche Duplicate Low	$628,339
503 Microfiche Duplicate High	$625,965
507 Microfiche Labor	$447,072
Total Revenue	$4,612,643
Total Units	
RPC 502 Microfiche Duplicate Low	6,383,897
RPC 503 Microfiche Duplicate High	7,819,396
Total Units	14,203,293
Step 2	
Baseline Unit Cost for Microfiche Duplication	$0.05

Step 3 - Sensitivity Analysis	
25% Gain in RPC 500, 501, & 507	
Cost Center 50 - Microfiche	$3,813,969
500 Microfiche 105 COM	($2,094,673)
501 Microfiche Planetary	($88,778)
507 Microfiche Labor	($234,340)
Plus CST Reallocation	$94,693
Total Cost (with assumed gains)	$1,396,179
Total Units	14,203,293
Upper Unit Cost Bound ($/unit)	$0.098
25% Loss in RPC 500, 501, & 507	
Cost Center 50 - Microfiche	$3,813,969
500 Microfiche 105 COM	($3,491,121)
501 Microfiche Planetary	($147,963)
507 Microfiche Labor	($390,566)
Plus CST Reallocation	$94,693
Total Cost (with assumed losses)	($120,988)
Lower Unit Cost Bound ($/unit)	($0.009)
(Round to $0.00 since negative)	

Duplicate 105mm Microfiche Unit Cost Range: $0.00 - $0.098 per fiche

Exhibit G-22 depicts the unit cost range calculation for the Addressing / Mailing / Delivery unit of comparison.

Exhibit G-22, Unit Cost Range Calculation for the Addressing / Mailing / Delivery Unit of Comparison

Step 1	
Total Cost for Addressing / Mailing / Delivery	
Cost Center 72 - Addressing/Mailing/Delivery	$12,022,933
RPC 721 (Auto Label Print/Apply)	($129,013)
RPC 722 (Postage)	($6,382,990)
RPC 723 (Prep for Ped-Apade Mail)	($272,797)
RPC 724 (DAPS Delivery Service)	($711,805)
RPC 725 (Contracted Delivery)	($396,277)
Plus CST Reallocation	$311,181
Total Cost	$4,441,232
Total Units	
RPC 720 (Address/Mail/Delivery)	83,443
Total Units	83,443
Step 2	
Baseline Unit Cost ($/Unit)	$53.22

Step 3 - Sensitivity Analysis	
Assume postage is direct cost (no deviation).	
25% Gain in RPC 721, 722, 723, 724, 725	
Cost Center 72 - Addressing/Mailing/Delivery	$12,022,933
Subtract Postage	($6,382,990)
RPC 721 (Auto Label Print/Apply)	($96,760)
RPC 723 (Prep for Ped-Apade Mail)	($204,598)
RPC 724 (DAPS Delivery Service)	($533,854)
RPC 725 (Contracted Delivery)	($297,208)
Plus CST Reallocation	$311,181
Total Cost (with assumed gains)	$4,818,705
Total Units	83,443
Upper Bound Unit Cost ($/Labor Hour)	$57.75
25% Loss in RPC 721, 722, 723, 724, 725	
Cost Center 72 - Addressing/Mailing/Delivery	$12,022,933
Subtract Postage	($6,382,990)
RPC 721 (Auto Label Print/Apply)	(161,266)
RPC 723 (Prep for Ped-Apade Mail)	(340,996)
RPC 724 (DAPS Delivery Service)	(889,756)
RPC 725 (Contracted Delivery)	(495,346)
Plus CST Reallocation	$311,181
Total Cost (with assumed losses)	$4,063,759
Total Units	83,443
Lower Bound Unit Cost ($/Labor Hour)	$48.70

Addressing/ Mailing/ Delivery Unit Cost Range: $48.70 - $57.75 per hour

Outsourcing and Document Automation Functions

KPMG was unable to determine unit cost ranges for either the Outsourcing or Document Automation function units of comparison. For this reason, only DAPS prices are depicted in the matrix of results for the Document Automation and Outsourcing units of comparison. These prices, however, do not represent DAPS cost for the units of comparison since DAPS suffered significant losses in both of these Departments.

Industry feedback also indicated that these functions present particular difficulty in developing a unit price range since these functions represent value-added services whose requirements vary from customer to customer and large variations in price are frequent. This is evident in the matrix summarizing DAPS costs and prices and industry located at the end of this section.

Matrix Comparing DAPS with Other Entities

Exhibit G-23 depicts the results of the public / private entity survey, DAPS prices, and the calculated units cost ranges for DAPS for all units of comparison.

Exhibit G-23, Comparison of DAPS Prices and Unit Cost Ranges with Public and Private Entity Prices

Product / Service	Unit	On/Off Site	DAPS Cost	DAPS Price	GPO	Company 1	Company 2	Company 3	Company 4	Company 5	Company 6	Company 7
Document Automation												
Desktop Publishing	Page	On-Site	N/A	$11.40	N/A	N/A	$2.00 - $7.75	N/A	N/A	N/A		
		Off-Site			$18.40	N/A	$2.00 - $7.75	N/A	N/A		$40 - $65/hour	$55 - $200
Conversion: hard copy to PDF	Page	On-Site	N/A	$4	N/A	N/A	$0.12 - $4.00	N/A	N/A	N/A		
		Off-Site			$2.60	$0.12 - $0.22	$0.12 - $4.00	N/A	N/A		$0.50	$6 - $11
Conversion: electronic files to PDF	Page	On-Site	N/A	$0.021	N/A	N/A	$0.004 - $0.006	N/A	N/A	N/A		
		Off-Site			$3.50	$0.02 - $0.03	$0.004 - $0.006	N/A	N/A		$1 - $3	$1.00 - $1.50
Web Page Development	Labor Hour	On-Site	N/A	$54	N/A	N/A	N/A	N/A	$100	N/A		
		Off-Site			$88	N/A	N/A	N/A	$60		$150 - $200	$85 - $150
First unit CD-ROM master	CD-ROM	On-Site	N/A	$35	N/A	N/A	$15	N/A	N/A	N/A		
		Off-Site			$278	$25 - $198	$15	N/A	N/A	$6.80	$25	$21.75 - $25.00
CD-ROM Reproduction	CD-ROM	On-Site	N/A	$10	N/A	N/A	$2.20	N/A	N/A	N/A		
		Off-Site			$0.56	$13.30 - $15.00	$2.20	N/A	N/A	$6.10	$2 - $4	$7 - $8
Electronic Output												
Small volume printing	Page	On-Site	$0.0252 - $0.0286	$0.025	N/A	$0.018 - $0.02	N/A	$0.025 - $0.05	$0.05	N/A		
		Off-Site			$0.0033	$0.013 - $0.015	N/A	$0.035 - $0.065	$0.04	$0.0225 - $0.035	N/A	$0.03 - $0.09
Small volume printing	Page	On-Site	$0.0252 - $0.0286	$0.025	N/A	$0.018 - $0.02	N/A	$0.02 - $0.05	$0.04	N/A		
		Off-Site			$0.003	$0.013 - $0.015	N/A	$0.03 - $0.06	$0.03	$0.0225 - $0.035	$0.02	$0.03 - $0.09
Large volume printing	Page	On-Site	$0.0252 - $0.0286	$0.023 - $0.025	N/A	$0.018 - $0.02	N/A	$0.0055 - $0.0058	$0.05	N/A		
(from disk / hard copy)		Off-Site			$0.0011	$0.013 - $0.015	N/A	$0.0065 - $0.0069	$0.04	$0.0225 - $0.035	N/A	$0.004 - $0.007
Large volume printing	Page	On-Site	$0.0252 - $0.0286	$0.023 - $0.025	N/A	$0.018 - $0.02	N/A	$0.005 - $0.0054	$0.04	N/A		
(from disk / hard copy)		Off-Site			$0.001	$0.013 - $0.015	N/A	$0.006 - $0.0063	$0.03	$0.0225 - $0.035	$0.02	$0.004 - $0.007
Large volume printing	Page	On-Site	$0.0252 - $0.0286	$0.023	N/A	$0.018 - $0.02	N/A	$0.0054 - $0.0056	N/A	N/A		
(from mainframe)		Off-Site			$0.012	$0.013 - $0.015	N/A	$0.0063 - $0.0067	N/A	$0.0225 - $0.035	N/A	$0.004 - $0.007
Large volume printing	Page	On-Site	$0.0252 - $0.0286	$0.023	N/A	$0.018 - $0.02	N/A	$0.0049 - $0.0052	N/A	N/A		
(from mainframe)		Off-Site			$0.011	$0.013 - $0.015	N/A	$0.0059 - $0.0062	N/A	$0.0225 - $0.035	$0.02	$0.004 - $0.007
Leave and Earnings Statement	2 sided page	On-Site	$0.0712 - $0.119	$0.095	N/A	N/A	N/A	$0.12 - $0.14	N/A	N/A		
		Off-Site			$0.0145	N/A	N/A	$0.14 - $0.16	N/A	$0.014 - $0.018	$0.02	N/A
Offset Duplicating / Printing												
Offset duplicating / printing	Page	On-Site	$0.0138 - $0.0159	$0.0035 - $0.0185	N/A	N/A	N/A	N/A	N/A	N/A		
		Off-Site			N/A	N/A	N/A	N/A	N/A	N/A	N/A	$0.005 - $0.025
Reproduction												
Black & white engineering drawings	Sq. Foot	On-Site	$0.22 - $0.24	$0.19	N/A	N/A	N/A	N/A	$1.00	N/A		
		Off-Site			$0.053	N/A	N/A	N/A	$1.00	$1.25	N/A	N/A
Color copies	Page	On-Site	$0.58	$0.67 - $0.87	N/A	N/A	N/A	N/A	$0.69	N/A		
		Off-Site			$0.25	N/A	N/A	N/A	$0.59	$0.75	N/A	N/A
Microfiche												
Microform production	Fiche	On-Site	$1.14 - $1.58	$1.59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Off-Site			$0.042	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Duplicate 105mm microfiche	Fiche	On-Site	$0.00 - $0.10	$0.08 - $0.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Off-Site			$0.0683	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Outsourcing												
Outsourced printing management	N/A	On-Site	N/A	Cost	N/A	N/A	N/A	N/A	N/A	N/A		3% - 15%
		Off-Site			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Copier/MFD contract management	N/A	On-Site	N/A	Cost + 5.5%	N/A	N/A	N/A	N/A	N/A	N/A		N/A
		Off-Site			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Miscellaneous Processes / Projects												
Addressing, mailing, and delivering	Labor Hour	On-Site	$48.70 - $57.75	$44.82	N/A	N/A	N/A	N/A	N/A	N/A		
		Off-Site			N/A	N/A	N/A	N/A	N/A	N/A	N/A	$25 - $40